

# **PresencePLUS<sup>®</sup> P4** **Vision Sensors** **Sealed for Challenging Industrial Environments.**



## **Sealed Vision Sensors Deliver the Functionality of Advanced Vision and a Proven Interface into Harsh Environments.**

The *PresencePLUS* P40MNI and COLOR OMNI are now available in an IP68-rated housing for machine vision inspections in challenging industrial and washdown environments. Designed to withstand demanding conditions, the new one-piece sealed P4 models deliver the comprehensive suite of *PresencePLUS* inspection tools into environments that might normally challenge general vision products. The compact, robust sensor is suited for a wide variety of environments including automotive, assembly, food handling, printing, pharmaceutical and packaging.

- Sealed IP68 housing and connectors to withstand dust, moisture and washdown
- Compact and durable nickel-plated aluminum housing to tolerate shock and vibration
- A complete suite of location, inspection, analysis and geometric tools; all can be used simultaneously for inspecting multiple features and complex applications
- Premium tools for enhanced inspection capabilities; including Bar Code Reading (BCR), Optical Character Reading and Verification (OCR/OCV), and Bead inspection
- ▶ Standard or high-resolution 1.3 megapixel gray scale, and color models for nearly any inspection challenge
- ▶ Proven user interface common to all *PresencePLUS* sensors
- ▶ Intuitive Wizard-like setup procedure and common graphical interface; supports nine languages
- ▶ Ethernet, serial, flexible discrete I/O and real-time video output in the same full-featured sensor
- ▶ ActiveX utilities for exporting inspections, images and results

## **Powerful Inspection Tools in a Compact, Robust Housing**

The Sealed *PresencePLUS* P4 solves thousands of applications in your plant.

- Label alignment inspection
- Color verification and matching
- Flaw detection
- 2D and 1D barcode reading
- Optical character reading and verification
- Packaging inspection
- Assembly verification
- Fill level detection
- Adhesive bead inspection
- Vial stopper inspection
- Drilled hole inspection
- Orientation verification
- Part or model identification
- Error proofing



**40-plus years of sensor design experience, quality control, sales support and cost-effective solutions:**

- Banner quality products with global availability
- Rapid customization with most products shipping in 3 days or less
- Industry's largest force of application engineers to solve your toughest challenges
- More than 3,000 factory and local field representatives to serve you

[www.bannerengineering.com](http://www.bannerengineering.com)

**1.888.373.6767**

**bannerengineering.com**



**more sensors, more solutions**

# PresencePLUS® P4 Sealed Vision Sensors, 10 to 30V dc

Models	Vision Tools	Housing	Resolution (pixels)	Add Premium Tool to Model (example, P4ORS-BCOC)
P4ORS	OMNI Gray Scale	Right-Angle	640 x 480	BC = Bar Code Reader
P4O1.3RS	OMNI Gray Scale		1280x1024	OC = OCR/OCV
P4CORS	COLOR OMNI		752 x 480	BD = Bead
				BCOC = Bar Code Reader & OCR/OCV
				BCBD = Bar Code Reader & Bead
				BDOC = Bead & OCR/OCV
				BCBDOC = Bar Code Reader, Bead & OCR/OCV


## Lens Covers

Model*	Length
P4SLC50-G P4SLC50-P	50 mm
PPSLC75-G PPSLC75-P	75 mm

\*G = Glass P = Plastic

## Quick-Disconnect (QD) Cordsets


### Power Cordsets

Description	Model	Length
	MQDC2S-1206	2m
	MQDC2S-1215	5 m
	MQDC2S-1230	9m
	MQDC2S-1250	16m


### Ethernet Communication Cordsets

Description	Model	Length
	STP-MAQDC-806	2m
	STP-MAQDC-815	5 m
	STP-MAQDC-830	9m


### Video Cordsets

Description	Model	Length
	PKG4M-2/CS	2m
	PKG4M-5/CS	5 m
	PKG4M-9/CS	9m

### Lighting Cordsets (Double-Ended)

Description	Model	Length
	PKG3M-35-PSG3M	350 mm
	PKG3M-2-PSG3M	2m

### Lighting Cordsets (Splitter)

Model	Branches	Trunk
	Branch 1 3-pin Pico-style (Male) 0.3 m	Flying Leads 4 m
	Branch 2 5-pin Euro-style (Female) 0.3 m	

## Dimensions



NOTE: Dimensions do not include optional lens cover. Lens covers available in 50 and 75 mm lengths.

## P4 OMNI Tools

### Gray Scale Tools



**Average Gray Scale.** Determines the average gray scale value of an area



**Blob.** Determines the presence, connectivity and location of selected features



**Edge.** Determines the presence, number, classification and location of edges



**GEO Count.** Detects the presence and location of target pattern in any orientation



**Object.** Determines the presence, number, classification, size and location of objects



**Pattern Count.** Determines the presence, number and location of a pattern(s)

### Color Tools



**Color Match.** Inspects for matching hue and intensity



**Average Color.** Tests or communicates color content values sensed in a selected area



**Color Blob.** Determines the presence, connectivity, size and location of selected features with one or more colors

### Premium Tools



**Bar Code.** Finds, decodes and grades 2D and 1D linear bar codes



**Bead Tool.** Monitors a track of material for width consistency and location



**OCR/OCV.** Reads and verifies optical characters

## A choice of lighting

- A complete selection of lighting, including IP68-rated lights
- Rugged, maintenance-free LED lighting in red, green, blue, white and infrared
- High-intensity lighting with built-in universal strobe control and power regulations; no external controller or power supply required



Banner Engineering Corp.

[www.bannerengineering.com](http://www.bannerengineering.com)

9714 Tenth Avenue North • Minneapolis, Minnesota 55441 • (763) 544-3164 • Fax: (763) 544-3213

Toll-free: 888-373-6767 • [www.bannerengineering.com](http://www.bannerengineering.com) • Email: [sensors@bannerengineering.com](mailto:sensors@bannerengineering.com)

PN 146279

**BANNER®**  
more sensors, more solutions